

Update: Drive Clean Program Emissions Benefit Analysis and Reporting – Heavy Duty Diesel Vehicles (HDDV) – 2006, 2007

Introduction

Smog is a serious health-related problem in Ontario, and motor vehicles are a major domestic source of smog in Ontario and a source of several other toxic contaminants. The Drive Clean program reduces smog-causing emissions by requiring vehicles to be tested to identify emissions problems, and to have them repaired before licence plate renewal or ownership transfer.

The Drive Clean program for heavy duty diesel vehicles (HDDV) includes all diesel-powered large trucks and buses registered in Ontario. The diesel engines in these vehicles are a major source of airborne microscopic particulate matter (PM), a constituent of smog and an identified health risk.

A full report providing an analysis of Drive Clean HDDV emissions reductions to the end of 2005 (**Drive Clean Program Emissions Benefit Analysis and Reporting – Heavy Duty Vehicles – 2000 to 2005**) by an independent consultant, G.W. Taylor Consulting, is posted on the Drive Clean website (www.driveclean.com). This update extends the analysis to the end of 2007.

The latest Drive Clean analysis shows continued reductions in harmful HDDV emissions, particularly PM. Numerous studies endorsed by medical authorities, including the Ontario Medical Association and Toronto Public Health, have linked PM to aggravated cardiac and respiratory diseases such as asthma, bronchitis and emphysema and to various forms of heart disease.

Diesel emissions also include smog-forming compounds of hydrocarbons (HC) and nitrogen oxides (NOx). By reducing harmful vehicle emissions, including PM, Drive Clean contributes to the government's goal of ensuring better health for Ontarians.

For this update, G.W. Taylor Consulting applied the same malperformance model used previously to estimate emissions reductions related to the Drive Clean opacity (smoke) test. Over the years, program improvements to the baseline MOBILE model (the computer model that is widely used in both the U.S. and Canada to calculate emissions), and to the approach used for allocating HDDVs to weight classes, have increased the accuracy of the emissions reduction estimates.

Particulate matter reductions (tonnes) from 2000 to 2007 resulting from Drive Clean are shown in the following table:

Year	2000	2001	2002	2003	2004	2005	2006	2007
PM	259	252	245	226	205	268	187	254

This update indicates that in 2006 and 2007, Drive Clean was responsible for reducing PM emissions by 187 and 254 tonnes, respectively. During the 8 year reporting period from 2000 to 2007, Drive Clean has reduced PM emissions by an average of over 200 tonnes per year and a cumulative total of almost 1,900 tonnes.

For detailed information on the methodology used to calculate the emissions reductions in this update please see the report **“Drive Clean Program Emissions Benefit Analysis and Reporting – Heavy Duty Vehicles – 2000 to 2005”** by an independent consultant, G.W. Taylor Consulting, which is posted on the Drive Clean website (www.driveclean.com).